



# FEMA

**MINUTES OF THE  
FEDERAL INTERAGENCY COMMITTEE ON  
EMERGENCY MEDICAL SERVICES (FICEMS)  
Ambulance Safety Subcommittee**

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| <b>DATE &amp; TIME:</b>                  | September 1, 2005 1:00 p.m.  |
| <b>LOCATION:</b>                         | FAA, NHTSA<br>10th floor, MacCracken conference room<br>Washington, DC   |
| <b>MEMBER AGENCY<br/>REPRESENTATION:</b> | <b>Department of Homeland Security</b><br><i>Federal Emergency Management Agency (FEMA)</i><br>No Representation   |
|  | <b>Department of Health and Human Services<br/>(DHHS)</b><br>Ms. Nancy Romano, AS Subcommittee Chair<br>National Institute for Occupational Safety and Health<br>(NIOSH)*<br><br>Mr. Paul Moore, NIOSH<br><br>Mr. Jim Green, NIOSH |
|  | <b>Department of Commerce (DOC)</b><br>No Representation   |
|  | <b>Department of Defense (DOD)</b><br>No Representation  |
|  | <b>Department of Interior</b><br>No Representation   |
|  | <b>Department of Justice (DOJ)</b><br>No Representation  |
|  | <b>Department of Labor</b><br>No Representation  |

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|  | <b>Department of Transportation (DOT)</b><br>Mr. Drew Dawson<br>National Highway Traffic Safety Administration (NHTSA)<br><br>Mr. Gamunu Wijetunge, NHTSA<br><br>Mr. Dave Bryson, NHTSA<br><br>Ms. Susan McHenry, NHTSA |
|  | <b>Department of Veteran Affairs</b><br>No Representation   |
|  | <b>Federal Bureau of Investigation (FBI)</b><br>No Representation   |
|  | <b>Federal Communications Commission</b><br>No Representation   |
|  | <b>General Services Administration (GSA)</b><br>Mr. John McDonald   |
| <b>OTHER ATTENDEES<br/>PRIVATE SECTOR:</b> | <b>American Ambulance Association</b><br>Mr. Kurt Krumperman  |
|  | <b>American Integrated Training Systems</b><br>Mr. Billy Rutherford   |
|  | <b>American Medical Response</b><br>Mr. Ron Thackery  |
|  | <b>American Society Testing and Materials</b><br>Mr. Pete Chambers  |
|  | <b>American Ambulance Corps</b><br>Mr. Larry Wiersch*   |
|  | <b>NYC Fire Department</b><br>Mr. Rob Rahab*  |
|  | <b>VFIS</b><br>Mr. Rick Patrick<br>Mr. Tony Deavens   |
|  | <b>Fairfax County Fire &amp; Rescue</b><br>Mr. Dan Gray*  |

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|  | <b>Maryland Institute for Emergency Medical Services System</b><br>Ms. Rene Fechter |
|  | <b>National Volunteer</b><br>Mr. Gerald Robinson*                                   |
|  | <b>FAAC</b><br>Mr. Sam Worrell*   |

*\*Dial-in Participants*

## **I. ANNOUNCEMENTS & INTRODUCTIONS**

Ms. Nancy Romano, Chairman – Ambulance Safety (AS) Subcommittee called the meeting to order at 1:00 p.m. and proceeded with introductions.

## **II. REVIEW OF PAST MEETING MINUTES & ACTION ITEMS**

Ms. Romano made a motion to approve the minutes from the June 2005 meeting, the motion was second and the minutes were approved.

The first action item – completed

Dr. Nadine Levick held a webinar presenting simulation training pros and cons that took place on June 17, 2005. PowerPoint slides were presented during the teleconference. A transcript of the teleconference has been made available, but unfortunately the PowerPoint slides can not be released right now, due to some publishing issues.

## **III. NEW BUSINESS**

### **NY Fire & Rescue: Mr. Rob Rahab**

Mr. Rahab gave a summary on simulator training program being used by his organization.

Mr. Rahab is in charge of the EVOC program in New York City. The program received the simulator used during its training 1 year ago and has trained 700 student operators. The information gathered during 2003-2004 year has shown that there has been a reduction in the collision rate to 12%. The training has also shown to improve decision making as well as hand and eye coordination skills in the students.

The simulation training is administered in other types of training given to students. This includes refresher training that includes didactic responses given to EMTs and Paramedics once every 3 years.

Kurt Krumperman asked how long the simulation training lasts and the basis for scoring. i.e. pass/fail?

Mr. Rahab responded that the training is not based on pass/fail because the program is designed to help the students learn from their mistakes. The students are encouraged to critique themselves and make the necessary improvements.

The length of the simulation training is 52 hours. This consists of 8 hours of lecture followed by 6 days of simulation training that includes training on a cone precision driving course that each student spends 15 minutes each day.

The simulator is a Ford F350 cab cut down (no passenger seat). It is surrounded by plasma screen monitors that provide a 180° field of vision. The cab also has motion seats that provide a realistic feel of street driving, including bumps in the road. All of the gadgets in the cab work as well. The student is able to use the lights, sirens, radio and signals.

**FAAC: Mr. Sam Worrell**

Mr. Worrell, a simulation expert continued the discussion Mr. Rahab started on simulation training equipment systems. Mr. Worrell explains that there are various simulation systems to choose from when designing a training program for your organization; some have fixed seats and others have motion seats. FAAC has custom designed training simulators for various organizations such as the military and fire departments throughout the country.

Mr. Worrell explains that the simulators provide a scenario toolbox that can be used during training sessions to recreate any type of incident that may occur on the street. These types of scenarios have been used in the training of future drivers. One such recreation is currently being conducted in LA. Once a recreation is created, it can be saved and replayed for future use; such as evidence during litigation cases. Mr. Worrell added that there are performance measurement system packages available that can be built into the simulators.

Mr. Larry Wiersch, American Ambulance Corps asked if there are attempts to regionalize training centers and what is the cost of the simulators.

Mr. Worrell responded that numerous agencies are looking into creating regional training centers. The city of Los Angeles does this by using mobile training simulators, however smaller cities cannot afford to buy simulators on their own, so LA invites organizations from smaller areas to train at their facility; New York City does the same. The costs of the simulators vary tremendously because they are designed and customized to fit the needs of the client. The simulator used by the NY Fire & Rescue has been customized. The simulator contains a cab and is designed to give an authentic feel and the full driving experience with a view included. The cost of the simulator is around \$400K. Whereas, the city of LA's simulator is simpler in design; it has no cab and it does provide an authentic feel. The cost of this simulator is around \$100K.

Mr. Billy Rutherford notes that he is going to New York City to see the simulator used by the NY Fire & Rescue first hand and will coordinate a teleconference to discuss his findings as well as further uses of simulators.

Mr. Worrell concluded his presentation.

**GSA: Mr. John McDonald**

Mr. John McDonald, reported that restructuring of some of the GSA funding lines are currently being implemented in order to make acquiring vehicles more readily available to support the needs of the Gulf Coast first responders.

**American Ambulance Association (AAA): Mr. Larry Wiersch**

Mr. Larry Wiersch reported that his organization's annual conference is taking place in Las Vegas on November 28, 2005. The conference will feature a number of special tracks designed specifically to educate and teach vehicle safety.

Mr. Krumperman asked if AAA has developed any data points on accident reporting.

Mr. Wiersch responded that there are different versions circulating, but there is nothing concrete at this time and concludes his reporting.

**NIOSH: Mr. Paul Moore**

Mr. Paul Moore, project officer at NIOSH reported on the updated findings of the Ambulance Worker Safety study.

Mr. Moore then introduced Mr. Jim Green as a significant contributor to the study.

Mr. Moore began his presentation explaining that the concentration of testing was on occupant restraints in the compartments of ambulances for the EMT attendant safety and not on patient safety. In this study, there was a project team that involved 3 separate branches; protective technology, surveillance field investigation, analysis and field evaluation.

Mr. Moore shared some compelling video of both frontal and side crash test results that were conducted as part of the study to investigate what restraints are available to allow mobility while ambulance attendants are performing CPR and caring for the patient. The occurrence of CPR being performed in an ambulance had an agreed consensus among the meeting participants to be between 2%-5%. A criteria used in the study was that the restraints tested had to have some level of protection found in the front seat of the ambulance as well as the same level of safety found in cars.

Mr. Krumperman asked that during the video presentation of one of the crash scenarios, there was extreme movement between the unrestrained dummy and the restrained dummy, is there research to compare the two?

Mr. Moore responded that there is data available that measures the various seat belt restraint systems. The finding is that restraints across the chest in a criss cross configuration on the dummy attendant instead of shoulder straps on the attendant will provide more resistance and will not cause a high level of movement as before.

Mr. Moore continued by stressing that the research is based on worker safety and not on patient safety. There is very little research in the U.S. being conducted that focuses on the patient. All current research data concerning patient safety being used has been generated and supplied by the Canadian government and Canadian ambulance safety organizations.

Mr. Moore suggests that the government should consider making the requirement of purchasing seats with high backs with padding imperative in order to improve efforts of ambulance safety made by organizations, as well as energy-absorbing padding, shoulder straps on the cot, and outfit ambulances with upgrade cot mounts to the vehicle frame.

Mr. Krumperman asked if there has been research done in the redesign of the bench seat and have potential manufacturers been identified.

Mr. Moore responded that the subject has only been discussed and not really looked into.

Mr. Rob Rahab, NYC Fire Department asked if he could obtain the results of Mr. Moore's findings. Mr. Moore told him that he could not share the results nor could the manufacturers involved due to legal issues, but he is feverously working to get the final report completed. The anticipated release date of the report is the end of December 2005.

Mr. Jim Green reported that he will be a presenter at the World Safety Congress in Orlando, FL on September 22, 2005.

Mr. Moore indicated that the Phase II study's main focus is on the restraint systems involving the human factor. The study is funded for 4 years (2004-2007). Ambulance attendant safety while working in a moving vehicle will be the continued focus except live test subjects will be used as the ambulance attendants and patients instead of test dummies. The acquisition of an ambulance is currently underway as well as the enlistment of volunteers.

No further reports presented.

#### **IV. NEXT MEETING AGENDA ITEMS**

Ms. Romano asked if there were any items to be presented at the next meeting. There were no comments.

#### **V. NEW and/or ONGOING ACTION ITEMS**

Mr. Larry Wiersch will take part in an AAS conference, November 28, 2005 through December 2, 2005 in Las Vegas, Nevada. It will focus on vehicle safety driving practices. Mr. Brian Maguire will be present to contribute on the influence of the human factor.

Mr. Billy Rutherford will conduct a teleconference regarding simulators in November; date TBD.

Mr. Rahab and Mr. Worrell made a request to be added to the AS database.

Mr. Jim Green will be a presenter at the World Safety Congress in Orlando, FL on September 22, 2005. Dr. Nadine Levick will be a presenter as well.

#### **VI. NEXT MEETING**

December 1, 2005, 1:00 p.m.  
HRSA, Rockville, MD

#### **VII. ADJOURNMENT**

Ms. Romano adjourned the meeting adjourned at 2:00 p.m.